

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant: Jeffrey R. Dahlen, et al.

Title: USE OF B-TYPE NATRIURETIC
PEPTIDE AS A PROGNOSTIC
INDICATOR IN ACUTE
CORONARY SYNDROMES

Appl. No.: 09/835,298

Filing Date:
Date:

Examiner: Lam, Ann Y.

Art Unit: 1641

Conf. No. 4762

REPLY BRIEF UNDER 37 C.F.R. § 41.41

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Sir:

In reply to the Examiner's Answer mailed June 4, 2007 Applicants (herein, "Appellants") submit this Reply Brief regarding the Final Rejection of claims 23-28, 32-34, and 38. If any fee due is absent or incorrect, please charge or credit our Deposit Account No. 19-0741 for the appropriate amount.

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RELATED APPEALS AND INTERFERENCES

The Examiner's Answer states that the Examiner is not aware of any related appeals, interferences, or judicial proceedings that would have a bearing on the Board's decision in this Appeal. This is incorrect.

As noted in the Appeal Brief filed by Appellants, the present application, filed on April 13, 2001, was the subject of an interference with U.S. Patent 6,461,828 issued to Stanton and Jackowski, in which judgment was entered against Stanton and Jackowski. A copy of the preliminary motions decision and the final judgment from the interference was provided with the Appeal Brief.

As Appellants also noted, following entry of judgment against Stanton and Jackowski in the interference, a formal Notice of Allowance was issued in the present application. Out of an abundance of caution, Appellants filed a Request for Continued Examination so that various publications made of record in the interference could be placed into the present application's file history. Appellants' Request for Continued Examination initiated a new set of rejections in the present application which included (i) definiteness rejections over language that had been in the claims throughout the period in which the interference was contested and the Notice of Allowance issued, and (ii) an obviousness rejection based upon publications that were of record in the application throughout the period in which the interference was contested and the Notice of Allowance issued. In the Office Action (made final) mailed January 29, 2007, the definiteness rejections were no longer discussed, presumably leaving only the obviousness rejection as the subject of this Appeal.

Importantly, the subject matter of the present claims (and, indeed, claims that are substantially broader than the claims that are the subject of this Appeal) has been allowed at least three times by the Office -- once when issuing the Stanton and Jackowski patent, and *twice in the present application* (that is, both before and after the interference). Despite these facts, the pending claims stand rejected.

STATUS OF CLAIMS

Claims 1-22 have been cancelled.

Claims 23-28 are pending in this application.

Claims 29-31 and 35-37 are withdrawn.

Claims 23-28, 32-34, and 38 are the subject of this appeal.

The pending claims are presented in Appendix A of Appellant's Appeal Brief of March 6, 2007.

GROUNDΣ OF REJECTION TO BE REVIEWED ON APPEAL

1. The rejection of claims 23-28, 32-34, and 38 under 35 U.S.C. 103(a), as allegedly being obvious over Jackowski, U.S. Patent 5,290,678, in view of Antman *et al.*, *N. Engl. J. Med.* 335: 1342-49 (1996), in further view of Richards *et al.*, *Heart* 81: 114-20, (1999).

ARGUMENT

The Examiner's Answer is, in all material aspects, simply a repeat of the arguments made in the final Office Action. Appellants provide the following remarks to emphasize the speciousness of certain specific points made in the Examiner's Answer.

1. The Examiner's interpretation of primary reference, the '678 patent, is flawed.

The Examiner continues to exhibit an initial bias that Appellants respectfully submit skews the Examiner's conclusion that the claimed subject matter is obvious. Specifically, the initial premise of the Examiner is that the primary reference, U.S. Patent 5,290,678 ("the '678 patent), "teaches the invention substantially as claimed." Examiner's Answer, page 3, final incomplete paragraph.

This initial premise is plainly incorrect, as the primary '678 patent does not teach detecting the combination of cardiac troponin with BNP (or a related molecule), or the use of any combination of markers for the claimed purpose - detecting cardiac mortality. Indeed, the Examiner has admitted as much. *See, Examiner's Answer*, page 4, first full paragraph. In plain fact, the primary '678 patent never mentions the use of BNP (or a related molecule) for any purpose whatsoever.

As the claims are directed to the combination of troponin and BNP for the purpose of prognosis, the initial premise that "Jackowski teaches the invention substantially as claimed" is patently not true. Appellants respectfully submit that an obviousness rejection premised on such an incorrect foundation is not fairly reflective of the scope and content of the prior art, and does not fairly reflect the differences between the prior art and the present claims. As such, the Examiner's *prima facie* case is fatally flawed from its very inception.

2. Richards et al. did not suggest combining cardiac troponin and BNP.

The present claims refer to performing at least two assays on a sample obtained from a patient. One of these assays measures a first marker which may be cardiac Troponin T or cardiac Troponin I; the second of these assays measures a marker which may be BNP, NT-proBNP, or

pro-BNP. The results of these assays are related to a prognosis for the patient, such as a mortality risk.

In allegedly arriving at the claimed invention, the Examiner asserts that it would have been obvious to perform this claimed combination of assays. In this regard, the Examiner cites Antman *et al.*,¹ which discloses that cardiac troponin is a predictor of risk following myocardial infarction, and Richards *et al.*,² which discloses that BNP is a predictor of risk following myocardial infarction.

But while the Examiner asserts that it would have been obvious to combine cardiac troponin and BNP measurements for purposes of prognosis, highly skilled artisans that were well placed to perform such a method apparently did not do so. Those artisans are the very Richards *et al.* cited by the Examiner in this rejection.

In order to conceive of the invention, one must have an understanding of the specific manner in which a problem – in this case, assigning a risk of an adverse outcome to a patient suffering from an acute coronary syndrome – is dealt with. In the rejection at issue, the Examiner asserts that it would have been obvious to combine cardiac troponin and BNP measurements as recited in the present claims, to deal with this problem. Appellants' conception stems from the insight that BNP measurements are independent predictors of adverse outcomes relative to traditional cardiac necrosis markers such as cardiac troponin. In contrast to Appellants' insight, Richards *et al.*, cited by the Examiner in the rejection, studied an acute MI population, measured both troponin T and BNP for this population, and concluded that BNP is an independent prognostic marker to certain other patient variables. Richards *et al.*, however, did not report that BNP is an independent predictor of adverse outcome relative to cardiac troponin.

Thus, despite (i) presumably having the relevant data in hand, (ii) the fact that BNP and troponin were individually known to be markers of poor prognosis after myocardial infarction

¹ *N. Engl. J. Med.* 335: 1342-49 (1996).

² *Heart* 81: 114-20 (1999).

for at least three years (by 1996 when Arakawa *et al.*³ and Antman *et al.* were published), and (iii) that the authors of Richards *et al.* were seeking independent markers of risk, the authors of Richards *et al.* did not conceive of the claimed invention.

One logical conclusion from the failure by Richards *et al.* to arrive at the claimed invention is that the authors of Richards *et al.* did not see any value in performing such an analysis. Support for this view comes from understanding in the art at the time that cardiac troponin and BNP would have been expected to provide similar prognostic information (a fact established in considerable detail by Appellants in the Appeal Brief). It may then be said that the claimed invention was plainly not obvious to the authors of Richards *et al.* Another logical conclusion is that the authors of Richards *et al.* did perform the analysis, but failed to discover that cardiac troponin and BNP were independent prognosis markers.

In either case, despite having data on both cardiac troponin and BNP, Richards *et al.*, does not suggest combining these markers as recited in the present claims, would not lead the skilled artisan to conclude that BNP provides independent prognostic information relative to cardiac troponin, and is evidence that doing so was not obvious to the very skilled artisans on whom the Examiner relies in the rejection..

3. Objective indicia of nonobviousness: copying

The Examiner's premise that the claimed invention would have been obvious from the cited art is further belied by the substantial evidence Appellants have provided concerning the unanticipated advantages of the claimed invention, and the acclaim, adoption, and copying that occurred in the art following the publication of the claimed invention. Such objective indicia "may often be the most probative and cogent evidence [of nonobviousness] in the record." Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1538, 218 USPQ 871, 879 (Fed. Cir. 1983).

As Appellants discussed in considerable detail in the Appeal Brief, the inventors discovered that prognostic information provided by BNP was demonstrated to be independent of the prognostic information provided by traditional necrosis markers such as cardiac troponin.

³ *J. Am. Cardiol.* 27: 1656-61 (1996).

That discussion is not repeated here. Appellants emphasize, however, that this contribution was considered so important in the scientific literature that the data and conclusions contained in the present application were published in the *New England Journal of Medicine*, perhaps the preeminent medical journal in the world. And moreover, Appellants' discovery was considered so important and so unexpected that it was not only deemed worthy of publication in the *NEJM*, but the *NEJM*'s editors also published an Editorial in the same *NEJM* issue, emphasizing the importance of the discovery to its readers. This is clear evidence of the acclaim that greeted publication of Appellants' data in the scientific literature.

Then, within less than one year of the publication of the data from the present application in *NEJM*, other researchers published a similar article concerning the biosynthetically related polypeptide NT-proBNP, demonstrating that NT-proBNP and cardiac troponin measurements also provide independent prognostic information in ACS, and stating that BNP and NT-proBNP are "remarkably similar" in this regard. See, Omland *et al.*⁴ That publication was followed by Sabatine *et al.*,⁵ which reports on the use of BNP, cardiac troponin I, and an inflammatory marker (C-reactive protein, or CRP) in a "multimarker strategy" for risk stratification of ACS patients.

In addition, Appellants have provided substantial evidence that prior to Appellants' discovery, the art lead the skilled artisan to erroneously believe that BNP (and the related peptides such as NT-proBNP) would at best provide similar information to cardiac necrosis markers such as troponin. Again, that discussion is not repeated here. But Appellants emphasize that it was not only unexpected and surprising that BNP measurements and cardiac necrosis markers (such as cardiac troponin measurements) would provide independent prognostic information in acute coronary syndromes, it was also unexpected and surprising that BNP measurements and cardiac troponin measurements would provide independent prognostic information across the entire spectrum of ACS conditions, rather than just in acute myocardial infarction.

⁴ *Circulation* 106: 2913-18 (2002).

⁵ *Circulation* 105: 1760-63 (2002).

Perhaps the clearest evidence of copying and adoption of the claimed invention may be found in the “BNP Consensus Panel 2004: A Clinical Approach for the Diagnostic, Prognostic, Screening, Treatment Monitoring, and Therapeutic Roles of Natriuretic Peptides in Cardiovascular Disease,”⁶, a report, prepared by “an expert panel . . . gathered by selecting clinicians and scientists with expertise with the natriuretic peptide system.” The unanticipated and practical advantages of combined measurements of BNP and cardiac troponin, and their adoption in the art, is made clear in this publication. For example, the discussion on page 16 entitled “Natriuretic Peptide Hormone Measurement in ACS/CAD summarizes “recent studies [demonstrating] that BNP or NT-proBNP elevation among patients with unstable angina and non-ST-segment elevation is associated with powerful and independent prognostic information.” The paragraph bridging the left and middle columns on page 16 discusses the findings summarized in the de Lemos *et al.* *NEJM* paper that reports the data underlying the claimed invention, and the Omland *et al.* and Sabatine *et al.* publications that followed closely theron, and concludes that these studies “[demonstrate] the unique predictive information that each of these biomarkers provides.” The publication concludes this section with the following “Consensus Statement” (emphasis added):

7.2 When used together in a combined strategy, BNP and cardiac troponin provide a more effective tool for identifying patients at increased risk for clinically important cardiac events related to HF and acute coronary syndrome. Multimarker panels that include BNP troponin, and C-reactive protein are now available and each of these markers provides unique and independent information with regard to patient outcomes.

4. Objective indicia of nonobviousness: unexpected result.

While Appellants’ evidence concerning these objective indicia of nonobviousness is focused upon literature references and a declaration by one of skill in the art (Dr. Norman Paradis), the Examiner’s response to Appellants’ evidence is based on personal opinion and a failure to properly consider the teachings of the prior art.

⁶ *CHF* 10[5 Suppl. 3]: 1-30 (2004).

For example, the Examiner has previously asserted that “Applicants have not provided evidence as to what was expected” (Final Office Action, page 22, lines 13-14) and “there is no indication in any of the cited references that BNP would provide similar information to troponin” (*id.*, page 20, lines 3-5). Appellants noted in the Appeal Brief that this assertion by the Examiner is baffling, given the extensive evidence of record to the contrary. The Examiner also previously asserted that “it is noted that the discovery that troponin I is an independent predictor of death is disclosed by the Antman *et al.* prior art reference, and the discovery that BNP is an independent predictor of death is disclosed by Richards *et al.*” Final Office Action, page 22, lines 15-18. Appellants noted in the Appeal Brief that any belief that the cited articles suggest that troponin I and BNP are independent of one another evinces a failure to carefully consider these publications, which discuss marker independence in only limited ways; Antman *et al.* indicates that troponin I is independent of CK-MB, while Richards *et al.* indicates that BNP is independent of clinical features, noradrenaline concentrations, and LVEF left ventricular ejection fraction.

The Examiner now asserts that the results to which Appellants refer “are already suggested by the prior art and are thus *not unexpected*,” allegedly because the cited Antman *et al.* and Richards *et al.* publications measure cardiac troponin and BNP at different times, so “*it is expected* that there is an increased likelihood of accurately predicting death since an assay for multiple markers for the prognosis increases the likelihood of detecting at least one of the markers at any point in time.” Examiner’s Answer, page 16, emphasis in original. Whether or not true, that two events might be separated in time does not suggest that they are independent, particularly when the weight of the prior art tells you that they are likely not independent.

The Examiner does not, and indeed cannot, point to any evidence of record in which the prior art suggests that the measurement of BNP would provide independent prognostic information in acute coronary syndromes relative to cardiac troponin measurements, or that BNP measurements and cardiac troponin measurements would provide independent prognostic information across the entire spectrum of ACS conditions. As discussed in detail in the Appeal Brief, the Examiner’s personal opinion does not negate the teachings of the prior art, evidenced

by Hassan *et al.*,⁷ Arakawa *et al.*, and Richards *et al.*, which, taken together, inform the artisan that BNP is a necrosis marker, and should perform like other such markers, including cardiac troponin; and that BNP and cardiac troponin would not be independent markers, since each are released from infarcted tissues in a similar fashion. The Examiner's personal opinion to the contrary is also belied by the acclaim and copying that followed publication of Appellants' invention.

In short, the Examiner does not establish that the objective indicia of obviousness established by Appellants were in any way expected from the prior art. Nor does the Examiner in any way establish that the prior art suggests the combined use of BNP and cardiac troponin measurements would provide independent prognostic information in acute coronary syndromes, or that BNP measurements and cardiac troponin measurements would provide independent prognostic information across the entire spectrum of ACS conditions.

5. The Examiner incorrectly fails to credit Appellants' objective indicia of nonobviousness.

Faced with the substantial amount of evidence establishing the various objective indicia of obviousness, the Examiner has offered various reasons why that evidence need not be considered. As discussed below, none of these reasons are proper.

For example, in response to Appellants' evidence that BNP provides prognostic information that is independent of cardiac troponin across the entire spectrum of ACS conditions including unstable angina, the Examiner has stated that "these arguments are not directed to the limitations claimed by applicants that are rejected by the Examiner." Final Office Action, page 20, lines 12-21. The Examiner's point, however, is irrelevant. The claims relate to prognosis in a patient with ACS. Appellants have provided evidence that it was unexpected that the claimed invention could provide superior prognostic information for the entire spectrum of ACS conditions. The fact that the Examiner focuses only on a myocardial infarction population in the rejection does nothing to diminish the relevance of Appellants' evidence of secondary indicia of nonobviousness which is clearly directed to the subject matter of the claimed invention.

⁷ *Médecine Nucléaire* 24: 301-10 (2000).

The Examiner (incredibly) now is asserting that “Appellants do not provide any evidence in support of [the assertion that BNP provides prognostic information across the entire spectrum of acute coronary syndromes].” Examiner’s Answer, page 18, first incomplete paragraph. Such an assertion is perplexing indeed in view of the evidence of record. There is, for example, the data in the specification that supports the statement at page 3, second full paragraph; the conclusion in the abstract of the de Lemos *et al.*⁸ *NEJM* paper (which reports the data in the present specification), which states that BNP “provides predictive information for use in risk stratification across the spectrum of acute coronary syndromes”; the discussion in Omland *et al.* on page 2917, right column, which states that “[t]he observation that natriuretic peptides are powerful indicators of not only short-term and medium-term but also long-term prognosis across the spectrum of ACS is a novel one”; and the statement in the “BNP Consensus Panel 2004: A Clinical Approach for the Diagnostic, Prognostic, Screening, Treatment Monitoring, and Therapeutic Roles of Natriuretic Peptides in Cardiovascular Disease” on page 15, paragraph bridging the left and center columns, which states that the de Lemos *et al.* *NEJM* paper shows the association of BNP with mortality “across the full spectrum of ACS.” One can only assume that the Examiner has not carefully considered such evidence.

Similarly, Appellants have noted that Sabatine *et al.*, which reports on the use of BNP, cardiac troponin I, and CRP in a “multimarker strategy” for risk stratification of ACS patients, confirms the data in the present specification and represents evidence of both copying and adoption by others of the claimed invention. The Examiner responds that Appellants remarks concerning Sabatine *et al.* do not specifically address “prognosis of death.” Final Office Action, sentence bridging pages 23 and 24, and repeated in the Examiner’s Answer at page 17, last sentence of first incomplete paragraph. Yet even a cursory reading of the Abstract of Sabatine *et al.* reveals that the publication discloses “a near doubling of the mortality risk for each additional biomarker that was elevated.” One can only assume that the Examiner has not carefully considered Sabatine *et al.*.

In the Examiner’s Answer, the Examiner continues to advance reasons to avoid such inconvenient facts. For example, regarding Omland *et al.*, which as noted above states that BNP

⁸ *N Engl J Med*. 345: 1014-21 (2001).

and NT-proBNP are “remarkably similar” with regard to the prognostic information they provide, their independence of cardiac troponin, *etc.*, and which Appellants have cited as demonstrative of adoption by others in the art and copying of the claimed invention. The Examiner responds that Omland *et al.* “is not relevant to the rejection which is based on the teachings of BNP, rather than proBNP or NT-proBNP.” Examiner’s Answer, page 17, first incomplete paragraph. Again, such an assertion is perplexing indeed. Omland *et al.* directly addresses BNP and the de Lemos *et al.* *NEJM* paper on page 2916, right column, calling it “an important, recent, large-scale study of the prognostic value of BNP in patients with ACS.” This is clear evidence that the claimed invention has been accepted and adopted in the art. Furthermore, each of the pending claims relate to the use of BNP , NT-proBNP, or pro-BNP. Thus, the data and conclusions presented in Omland *et al.* regarding NT-proBNP are also clear evidence that the claimed invention has been copied in the art. The fact that the Examiner focuses only on BNP in the rejection does nothing to diminish the relevance of Appellants’ evidence of secondary indicia of nonobviousness which is clearly directed to the subject matter of the claimed invention.

Likewise, rather than considering the “BNP Consensus Panel 2004: A Clinical Approach for the Diagnostic, Prognostic, Screening, Treatment Monitoring, and Therapeutic Roles of Natriuretic Peptides in Cardiovascular Disease” for what it teaches, the Examiner dismisses this evidence as not indicating that cardiac events include death, and so being unrelated to the present claims. Examiner’s Answer, page 18. In fact, as noted above, the discussion on page 16 entitled “Natriuretic Peptide Hormone Measurement in ACS/CAD summarizes “recent studies [demonstrating] that BNP or NT-proBNP elevation among patients with unstable angina and non-ST-segment elevation is associated with powerful and independent prognostic information.” The paragraph bridging the left and middle columns on page 16 discusses the findings summarized in the de Lemos *et al.* *NEJM* paper that reports the data underlying the claimed invention, specifically referring to the relationship to mortality risk. This section also refers to both Omland *et al.* and Sabatine *et al.* publications, each of which also addresses mortality risk. The Examiner has chosen to ignore this evidence merely because the “Consensus Statement” 7.2 refers to “patient outcomes” rather than to “mortality” or “death.”

There is no valid reason for the Examiner to ignore clearly relevant evidence in this manner. Furthermore, the approach taken by the Examiner is not fairly reflective of the scope and content of the prior art, and does not fairly reflect the teachings therein.

6. The Examiner fails to consider all claim limitations.

For the first time, the Examiner contends that claims 23 and 25 are not directed to “a method for predicting cardiac mortality rate in a patient,” despite the clear reference to such a method in the claims. Instead, the Examiner asserts that these claims require nothing more than detecting BNP and cardiac troponin. Examiner’s Answer, page 19. Appellants respectfully disagree. The language of claims 23 and 25 were previously the subject of a definiteness rejection in an office action mailed March 24, 2006. The rejection was premised on an allegation that “it is not clear how cardiac mortality rate is predicted,” and that the claims “[do] not indicate how prediction is made.” Appellants noted in reply that the language in these claims was present when they were initially deemed allowable prior to the interference with U.S. Patent 6,461,828 and was present in the claims during and after the interference which resulted in a formal notice of allowance. At no time until the Examiner’s Answer has this type of argument been raised.

The rejected claims refer to the use of at least two polypeptide markers, one of which is BNP, NT-proBNP, or pro-BNP, and the other of which is cardiac troponin I, cardiac troponin T, CK-MB, or C-reactive protein, in methods for assigning a prognosis (*e.g.*, a likelihood of death) to a patient. These methods comprise performing immunoassays for the two recited markers on a sample from the patient, where binding of the markers to their respective antibodies (that is, the immunoassay results for the markers measured) is determined. The assay results thus obtained are used to assign the prognosis of interest to the subject.

Appellants respectfully submit that the preamble of these claims, which recites “a method for predicting cardiac mortality rate in a patient,” is a limitation to these claims that must be considered. In this regard, the claims are similar to those discussed in *Griffin v. Bertina*, 285 F.3d 1029, 1033, 62 U.S.P.Q.2d 1431, 1434 (Fed. Cir. 2002):

A preamble to a claim “has the import that the claim as a whole suggests for it. *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed.Cir.1995). The preamble language in this

case is directed to “diagnosing an increased risk for thrombosis of a genetic defect causing thrombosis.”… Diagnosis is thus the essence of this invention; its appearance in the claim gives “life and meaning” to the manipulative steps. See *Kropa v. Robie*, 38 C.C.P.A. 858, 187 F.2d 150, 152, 88 USPQ 478, 481 (1951) (stating that a preamble is limiting when it is “necessary to give life, meaning and vitality to the claims or counts”). Consideration of the preamble gives meaning and purpose to the manipulative steps in this case. The first step recites that the test nucleic acid should be obtained from a “test subject.” In the absence of the preamble’s stated objective to diagnose thrombosis, the term “test subject” is empty language. What is one testing for, and who is a suitable subject? Similarly, without the preamble, “assaying for the presence of a point mutation” has no purpose. Obtaining nucleic acid and assaying for a point mutation alone are merely academic exercises. The preamble is thus a necessary limitation.

To the extent that the Examiner is arguing that claims 23 and 25 are anticipated or rendered obvious merely by reference to a method of detecting BNP and cardiac troponin, Appellants respectfully submit that the argument is without merit.

As described above, the Examiner begins the obviousness analysis with an initial bias -- that the primary ‘678 patent “teaches the invention substantially as claimed.” While the Examiner immediately contradicts this conclusion, Appellants respectfully submit that this initial bias colors the entire obviousness analysis and renders the obviousness rejection fatally flawed from its very inception.

CONCLUSION

The evidence of record, taken as a whole, compels the conclusion that the claims are non-obvious over the cited art. As described above, the Examiner begins the obviousness analysis with an initial bias -- that the primary ‘678 patent “teaches the invention substantially as claimed.” While the Examiner immediately contradicts this conclusion, Appellants respectfully submit that this initial bias colors the entire obviousness analysis and renders the obviousness rejection fatally flawed from its very inception.

Appellants have also provided detailed evidence that the claimed invention provides superior results because the prognostic information provided by BNP is independent of the prognostic information provided by cardiac troponin. Furthermore, Appellants have presented detailed evidence as to why this feature of the claimed invention was unexpected, and was

actually contrary to the teachings of the prior art, which informed the artisan that BNP is a classic necrosis marker and should perform like other such markers, including cardiac troponin. Appellants further presented evidence of the acclaim that greeted the invention and widespread adoption of the invention in the art. Appellants respectfully submit that this evidence concerning these objective indicia of nonobviousness is more than sufficient to rebut any *prima facie* case of obviousness that can possibly be established based on the references cited by the Examiner.

Appellants therefore request that the rejection of claims 23-28, 32-34, and 38 under 35 U.S.C. § 103(a) be withdrawn or reversed.

Respectfully submitted,

Date: 06/28/2007

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